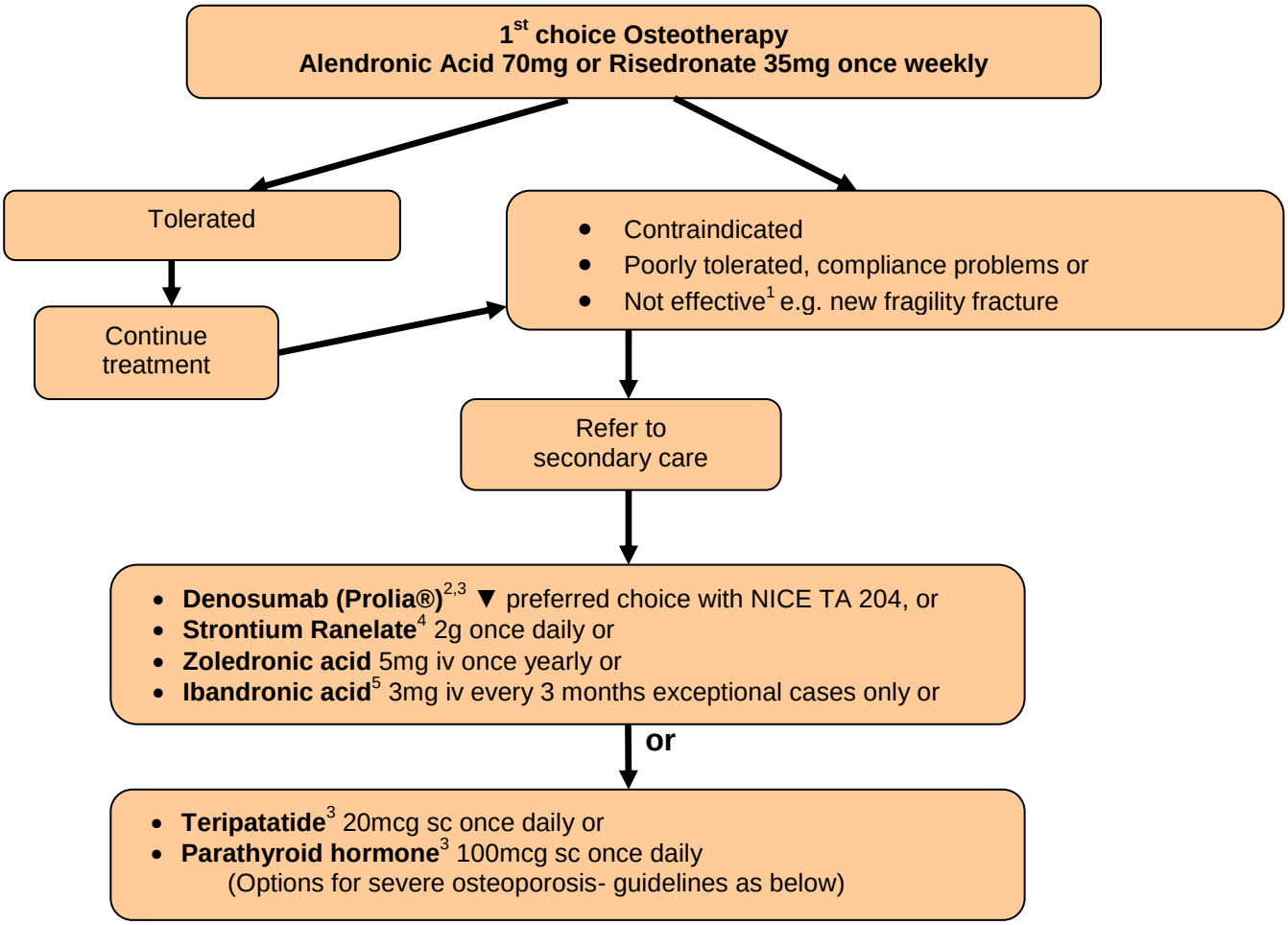
Kent and Medway Osteoporosis Network Primary Care Guidelines for the Secondary Prevention of Osteoporosis in Post-menopausal Women

- This guidance relates to treatments for the secondary prevention of fragility fractures in postmenopausal women with a clinically apparent fragility fracture and osteoporosis.
- Osteoporosis is defined by the WHO as T-score of −2.5SD or below on dual-energy X-ray absorptiometry (DXA), or may be assumed in women aged 75 years or older if the responsible clinician considers a DXA scan to be clinically inappropriate or unfeasible.
- FRAX/NOGG guidance may recommend osteotherapy without above DXA score.
- **Normal serum concentrations of calcium and vitamin D are needed to ensure optimum effects of the treatments for osteoporosis. Unless clinicians are confident that women who receive treatment meet these criteria, calcium and/or vitamin D supplementation should be considered**.



Recommend: ● **Regular weight-bearing exercise e.g. brisk walking, jogging, dancing** ● **Stop smoking** ● **Reduce alcohol intake**

[1] "Not Effective" i.e. unsatisfactory response is defined as occurring when a woman has another fragility fracture despite adhering fully to treatment for 1 year and there is evidence of a decline in BMD below her pre-treatment baseline.

[2] ▼ Black Triangle Drugs, there is limited experience of the use of these products and all suspected adverse reactions should be reported to the Commission on Human Medicines (CHM) through the Yellow Card Scheme.

[3] Kent & Medway guidance for prescribing criteria http://www.kentmedway.nhs.uk/welcome/for-professionals/prescribing/ See Shared Care Guideline for prescribing Denosumab (Prolia®) and guidelines for use of Teriparatide and Parathyroid Hormone.

[4] Strontium is now restricted to treatment of severe osteoporosis in postmenopausal women at high risk of fracture. Treatment should only be initiated by a physician with experience in the treatment of osteoporosis and the decision to prescribe should be based on an assessment of the individual patient's overall risks. See contraindications and cautions below and link to MHRA advice http://www.mhra.gov.uk/Safetyinformation/DrugSafetyUpdate/CON392870

[5] Ibandronic acid 150mg once monthly should only be prescribed if a monthly tablet is preferred and patient aged under 75 years, who are not at increased risk of falling. Ibandronic acid has only been shown to reduce vertebral fractures in clinical trials. UK licensed doses of ibandronic acid have not demonstrated definite peripheral fracture reduction.

Please refer to the full prescribing information prior to prescribing any of these products including the British National Formulary http://www.medicinescomplete.com/mc/index.htm and Manufacturers Summary of Product Characteristics http://www.medicines.org.uk/emc/

Selected contraindications and cautions

Drug	Contraindications	Cautions
Alendronic acid	Abnormalities of oesophagus and other factors which delay emptying e.g. stricture, achalasia; hypocalcaemia; inability to stand or sit upright for at least 30 minutes	Upper GI disorders (dysphagia, symptomatic oesophageal disease, gastritis, duodenitis or ulcers, history (within one year) of ulcers, active GI bleeding, upper GI surgery, renal impairment
Ibandronic acid IV		Consider preventive dental treatment before initiating (risk of osteonecrosis of the jaw); renal impairment; monitor renal function, calcium, phosphate and magnesium; cardiac disease (avoid fluid overload)
Risedronate sodium	Hypocalcaemia	Oesophageal abnormalities and other factors which delay transit or emptying e.g. stricture or achalasia, renal impairment
Strontium ranelate	Should not be used in patients with: ischaemic heart disease, peripheral arterial disease, cerebrovascular disease; a history of these conditions; or in patients with uncontrolled hypertension. Current or previous venous thromboembolic events including deep vein thrombosis and pulmonary embolism. Temporary or permanent immobilisation.	Predisposition to thromboembolism, renal impairment. Serious allergic skin reactions – stop treatment immediately if rash develops.
Parathyroid hormone(Preotact)		
Teriparatide (Forsteo)	Pre-existing hypercalcaemia, skeletal malignancies of bone metastases, metabolic bone diseases including Paget's disease and hyperparathyroidism, unexplained raised alkaline phosphatase, previous radiation therapy to the skeleton	Moderate renal impairment (avoid if severe)
Zoledronic acid		Renal impairment, severe hepatic impairment, cardiac disease, hypocalcaemia
Denosumab▼(Prolia®)	Hypersensitivity to the active substance or to any of the excipients. Hypocalcaemia. Adequate intake of calcium and vitamin D is important in all patients. Latex allergy Hereditary fructose intolerance	Cellulitis, eczema, hypocalcaemia, UTI or respiratory infection

Prescribing in renal impairment

Drug	Manufacturers recommendation	Other information / clinical experience
Alendronic acid	Not recommended if CrCl <35ml/min due to lack of experience	Very little evidence is available on use in renal impairment. A sub-analysis of a recent trial showed there was no increase in adverse events in women with eGFR <45ml/min.
Ibandronic acid	No dosage adjustment is necessary for patients with mild or moderate renal impairment where creatinine clearance is equal or greater than 30 ml/min. Not recommended for use in patients who have a creatinine clearance below 30 ml/min, because of limited clinical data.	A comparison of oral and intravenous ibandronic acid in PMO showed renal and urinary adverse reactions to be uncommon and comparable in frequency across all treatment arms (2-3%). No cases of acute renal failure were reported. It has been suggested that, due to the lack of clinical experience with ibandronate, it may be prudent to use an alternative bisphosphonate in renally impaired patients.
Risedronate sodium	Contraindicated if CrCl <30ml/min	Experience has found risedronate may be used in mild renal impairment (CrCl 20-50ml/min); half of the usual dose has been used where CrCl 10-20ml/min. The author of a recent study has been suggested treatment to be safe in patients with CrCl 15-30ml/min.
Strontium ranelate	Not recommended if CrCl <30ml/min, no dose adjustment required if CrCl 30-70ml/min	There is some evidence to suggest naturally occurring strontium may accumulate in patients with renal impairment but the clinical consequence of this is uncertain.
Parathyroid hormone(Preotact)	Avoid in severe renal impairment (no data available)	
Teriparatide (Forsteo)	Contraindicated in severe renal impairment	
Zoledronic acid	Contraindicated if CrCl<40ml/min	Zoledronic acid prescribed for PMO has not been

		shown to impair renal function compared to placebo, when monitored over a three-year period. However, it has been associated with renal toxicity when used in higher doses for the management of malignancies.
Denosumab▼(Prolia®)	Caution if eGFR < 30 . Clinical monitoring of calcium levels is recommended for patients predisposed to hypocalcaemia.	In the post marketing setting, rare cases of severe symptomatic hypocalcaemia have been reported in patients at increased risk of hypocalcaemia receiving Prolia.

References

1. BNF http://www.medicinescomplete.com/mc/index.htm
2. Manufacturers Summary of Product Characteristics accessed at www.emc.medicines.org.uk
3. NICE TA 161 Appraisal Consultation Document Osteoporosis – Secondary Prevention Including Strontium Ranelate http://www.nice.org.uk/nicemedia/live/11704/51970/51970.pdf Final appraisal dec 2010 http://publications.nice.org.uk/osteoporosis-assessing-the-risk-of-fragility-fracture-cg146
4. UKMI Q&A 169.1 Can oral bisphosphonates be given to patients with renal impairment for the management of osteoporosis?
5. UKMI Q&A 124.1 Can strontium ranelate be given to patients with renal impairment or patients on renal replacement therapies?
6. MHRA Drug Safety Update, March 2014. Strontium ranelate: cardiovascular risk—restricted indication and new monitoring requirements. http://www.mhra.gov.uk/Safetyinformation/DrugSafetyUpdate/CON392870

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